

Covered Product Data General Reporting and Verification Guidance for California's Mandatory GHG Reporting Program

Introduction

This document provides general guidance for reporting and verification of covered product data pursuant to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (title 17, California Code of Regulations, section 95100 et seq.) (MRR). Additional sector-specific covered product data guidance is available for hydrogen producers, cement producers, tomato processors, petroleum and natural gas producers, and petroleum refineries and coke calciners. These documents can be found on the [Mandatory GHG Reporting Guidance Documents website](#).

This guidance document describes the requirements of MRR. This guidance document does not, and cannot, create or vary any legal requirements of MRR.

This document addresses the following areas related to covered product data: relevant definitions used in this document, North American Industry Classification System (NAICS) code and general reporting requirements, accuracy and calibration requirements, and verification requirements. General reporting and accuracy requirements can be found in sections 95103(k)-(l) of MRR. Reporting requirements for specific covered product data are listed in sections 95110, 95113-95120, 95124, and 95156 of MRR. Revisions to this document that affect the 2017 data year, and future years, are included in section 6 (pages 9-13) for individual products reported in section 95115(n). No changes were made to measurement accuracy in section 4.

1 NAICS Code Reporting

Industrial allowance allocation eligibility under the Cap-and-Trade Regulation is determined by NAICS code. To receive allocation under a product-based benchmark listed in Table 9-1 of the Cap-and-Trade Regulation, entities must have reported a NAICS code listed in Tables 8-1 and 9-1 of the Cap-and-Trade Regulation and report the associated covered product data through the California Electronic Greenhouse Gas Reporting Tool (Cal e-GGRT). If a facility expects to receive industrial allocation under more than one product benchmark, it must report the NAICS code for each industrial activity. Primary and additional NAICS codes can be reported in Cal e-GGRT. NAICS code descriptions can be found at: <https://www.census.gov/eos/www/naics/>.

An entity with a NAICS code and performing an activity listed in Table 8-1 of the Cap-and-Trade Regulation, but without a NAICS code listed in Table 9-1 of the Cap-and-Trade Regulation, may be eligible for allocation under the Cap-and-Trade Regulation's energy-based allocation methodology. Because NAICS codes and activities from both Table 8-1 and Table 9-1 of the Cap-and-Trade Regulation are used to determine eligibility for allowance allocation, verifiers must confirm pursuant to section 95131(b)(4) of MRR that the NAICS codes reported accurately represent the operator's activities for those listed in Table 8-1 of the Cap-and-Trade Regulation. Pursuant to section 95131(b)(9) of MRR, if a reporting entity reports an inaccurate NAICS code(s) and the reporting entity does not submit a revised emissions data report to correct the NAICS code(s), the result will be an adverse product data verification statement.

2 Covered Product Data Reporting Methodologies

Covered product data reporting methods may differ by product. For most covered product data, reporting is based on production quantities of the finished products. Reporters may use two methodologies for reporting production quantities of non-intermediate covered product data: (1) production data or (2) sales data with an inventory adjustment (pursuant to sections 95103(k)(7) and 95103(k)(11), respectively). These two methodologies are considered equivalent. Operators must receive advance approval from CARB to change their reporting methodologies for covered product data (section 95103(m)).

Because not all covered product data are reported as production values, operators and verifiers must pay special attention to both the MRR reporting requirements for each covered product and the definitions for covered product data.

For the following covered product data, non-production quantities must be reported:

- Clinker *consumed* (section 95110(d)),
- Limestone and gypsum *consumed for blending* (section 95110(d)),
- Complexity weighted barrel *throughputs* or *inputs* (section 95113(l)(3)),
- Liquid hydrogen *sold* (section 95114(j)),
- Plaster sold as a separate finished product (section 95115(n)(3)),
- Nameplate horsepower of turbine generator units *tested* (section 95115(n)(4)),
- Glass *pulled* (section 95116(d)),
- and

- Natural gas *processed* (section 95156(d))

Further, for the following covered product data, production data must be reported when the products are not sold (i.e., they are intermediate, not final, products):

- Hot rolled steel produced (section 95115(n)(1)),
- Pickled steel sheet produced (section 95115(n)(1)),
- Adjusted hulled and dried pistachios, and flavored pistachios (section 95115(n)(17)),
- Blanched almonds, flavored almonds, and pasteurized almonds (section 95115(n)(17)),
- Intermediate dairy ingredients produced (section 95115(n)(16)), and
- Sulfuric acid produced from sulfuric acid regeneration (section 95115(n)(20)).

MRR also requires the reporting of other, non-covered product data. These data must be evaluated for conformance only and not material misstatement. Details of reporting these products are not addressed in this guidance document.

3 Measurement Accuracy and Meter Calibration Requirements

Section 95103(k) specifies the measurement accuracy and meter calibration requirements applicable to covered product data. If measurement accuracy cannot be demonstrated, operators must follow the provisions in section 95103(l) of MRR to exclude covered product data. For more information on metering and measurement accuracy and calibration requirements, refer to the Measurement Accuracy, Meter Calibration, and Missing Data Requirements guidance document found on CARB's [Mandatory GHG Reporting Guidance Documents website](#).

3.1 Measurement Accuracy and Meter Calibration Requirements

All measurement devices and data used to measure and calculate covered product data must meet the +/- 5 percent accuracy requirements outlined in section 95103(k) of MRR. Pursuant to section 95103(k)(10) of MRR, if a meter fails calibration, recalibration, or a field accuracy assessment, and the meter represents more than 5 percent of the overall covered product data, the operator must demonstrate by other means to the satisfaction of the verifier and/or CARB that the measurements used to calculate the covered product data still meet +/-5 percent accuracy going back to the last successful calibration or field accuracy assessment, or must exclude the data pursuant to section 95103(l). While the operator may demonstrate meter accuracy, if the operator reports the covered product data, the operator would still be issued a non-

conformance for failing to calibrate the meter in accordance with MRR requirements. A nonconformance would still be applied in those cases where a failed meter calibration or recalibration of meters represents less than 5 percent of an operator's overall covered product data.

If an operator is unable to meet the requirements for meter calibration in section 95103(k) of MRR without causing operational disruption, the operator may submit a calibration postponement request to CARB. A calibration postponement request must meet the requirements of sections 95103(k)(8) and (9) of MRR, and be approved by CARB.

If an operator identifies a situation in which conventional metering is not feasible or identifies an alternative method that achieves the +/- 5 percent accuracy required by section 95103(k)(6) of MRR, the operator may submit a request for approval of an alternative measurement/monitoring method by following the requirements in section 95103(m) of MRR.

Table 1 below shows various scenarios for demonstrating measurement accuracy and meeting meter calibration requirements for covered product data under MRR and how material misstatement and conformance are assessed under each scenario.

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Table 1: MRR Potential Covered Product Data Reporting Scenarios

Scenario	Approved method to demonstrate accuracy	Operator uses primary meter to report data	Method meets +/-5% accuracy requirement ¹	Primary meter status post-inspection	Operator includes product data or data in CWB calculation	Meter data included in material misstatement assessment	GHG Emissions Data Report in Conformance with section 95103(k)	Positive verification Statement Issued ²
1	Postponement	Yes	Yes ³	Pass ⁴	Yes	Yes	Yes	Yes
2	Postponement	Yes	Yes ⁵	Fail ⁶	Yes	Yes	Yes	Yes
3	Postponement	Yes	No ⁷	--	No, must exclude ⁸	No	Yes	Yes
4	Alternative	No ⁹	Yes	--	Yes	Yes	Yes	Yes
5	Temporary ¹⁰	No	Yes	Fail	Yes	Yes	Yes	Yes
6	Non-postponement	Yes	Yes	Fail ¹¹	Yes	Yes	No	Qualified ¹²
7	Non-postponement	Possible ¹³	No ¹⁴	Fail	No, must exclude ¹⁵	No	Yes	Yes

¹ Accuracy is demonstrated to the satisfaction of the verifier, and the verifier confirms the approved method was followed. CARB evaluates postponement requests to ensure they meet regulatory requirements; however, staff does not have access to data to allow them to evaluate conformance with +/-5% accuracy requirements.

² A positive verification statement is issued if the verifier finds reasonable assurance of no material misstatement and nonconformance

³ Accuracy demonstrated to the satisfaction of the verifier and CARB using methods described in the postponement request

⁴ Meter primary element passes inspection (e.g., meets AGA/ISO standards)

⁵ Accuracy demonstrated to the satisfaction of the verifier and CARB using methods described in the postponement request

⁶ Meter primary element does not pass inspection requirements in section 95103(k)(6); data from primary meter is still valid because accuracy was demonstrated and approved under postponement request

⁷ CARB approves method via the postponement request, but verifier finds that the accuracy requirements were not met

⁸ Section 95103(l) requires that inaccurate covered product data be excluded

⁹ CARB approves alternate method; operator uses engineering calculations that meet the accuracy requirements

¹⁰ Pursuant to section 95103(m)(4), CARB pre-approval not required for using a temporary method, but operator must notify CARB by the reporting deadline that a temporary method was used; use of temporary method limited to less than 365 days

¹¹ Meter primary element does not pass inspection requirements in section 95103(k)(6); data from primary meter is still valid because accuracy is within +/- 5 percent as demonstrated to a verifier and CARB

¹² Qualified Positive is possible if verifier finds reasonable assurance that there is no material misstatement

¹³ Operator either relies on data from primary meter or uses another means to demonstrate accuracy to the verifier and CARB for the time period in question

¹⁴ Meter does not satisfy the +/-5 percent accuracy requirement for a portion of the year

¹⁵ Section 95103(l) requires that inaccurate covered product data be excluded

3.2 Excluding Covered Product Data

With the exception of cement plants, operators that report covered product data must exclude inaccurate covered product data pursuant to section 95103(l) of MRR. When inaccurate data are excluded, the reporting entity must describe the excluded data and estimate it using best available methods. Operators must exclude covered product data if there is no evidence of accuracy. Pursuant to section 95103(l) of MRR, reporters may also exclude covered product data for other reasons, such as when the quantity of product does not warrant the effort required to report the data accurately.

4 Verification of Covered Product Data

Covered product data are subject to the verification requirements as specified in section 95103(l) of MRR, and must be evaluated both for conformance and material misstatement. The conformance evaluation determines if all MRR requirements have been met in preparing and reporting the covered product data. Beginning with 2017 data reported in 2018, verification bodies are required to confirm if all covered products conform with the reporting requirements in MRR, and document that review in their sampling plan. The material misstatement evaluation is based upon the total calculated facility covered product data, and reporters must demonstrate to the verification body that the total covered product data are accurate to within +/-5 percent.

If an alternative measurement method has been approved by CARB pursuant to section 95103(m) of MRR, the reported product data will be verified against the approved measurement method. This also applies to alternate methods associated with postponement requests granted pursuant to sections 95103(k)(8)-(9) of MRR. Any methods used to comply with meter calibration and accuracy requirements in section 95103(k) of MRR should be clearly outlined in the reporting entity's GHG Monitoring Plan (section 95105(c)). Because allowances are distributed based on covered product data, the verifier's risk analysis and sampling plan must include *all* covered product data. The verifier must conduct an in-depth review for covered products identified as the highest risk, including detailed data checks and review of data management systems. For all other covered products the verifier should at a minimum review the data management systems for data collection, and review data as needed, to reach reasonable assurance that each covered product meets the accuracy requirements of section 95103(k).

While each individual product is required to meet the accuracy requirements in section 95103(k); the material misstatement assessment is based on the sum total of the accurate covered product data not subject to exclusion, and not on each individual

product (see section 95131(b)(12)(A) of MRR). One exception exists: covered product data with different units of measure reported by the same entity (e.g., proof gallons, gallons, and short tons at wineries) must be evaluated separately for material misstatement. The material misstatement review does not include any excluded product data. An operator that excludes covered product data correctly, and who uses a reasonable method to separately estimate and report the quantity of excluded data, is in conformance with the regulation. A positive product data verification statement for the remaining data can result even if a large portion of covered product data is excluded. Material misstatement and other verification requirements still apply to the remaining reported covered product data, however.

5 Detailed Information on Some Covered Product Data

The following provides more detailed reporting guidance on some covered product data.

Section 95115(n)(1): Hot Rolled Steel Sheet, Pickled Steel Sheet, Cold Rolled and Annealed Steel Sheet, Galvanized Steel Sheet, and Tin Plate

Nonprime or other steel sheet products (hot rolled steel sheet, pickled steel sheet, cold rolled and annealed steel sheet, galvanized steel sheet, and tin plate) that do not meet quality specifications but otherwise meet the definitions for these covered product data in section 95102(b) of MRR are still considered covered product data as long as the product is sold to a customer and not landfilled, recycled, or otherwise wasted.

Section 95115(n)(1): Pickled Steel Sheet

Pickled steel sheet is an intermediate product that can be further manufactured into other final products, and may be reported both as an intermediate where that same quantity is reported under a different product data category, and also reported as a final product, if applicable. For example, 100 tons of pickled steel sheet is produced and 40 tons is further processed into galvanized steel sheet. The reporting entity could report both the 100 tons of pickled steel sheet and the 40 tons of galvanized steel sheet. Final products that are not made from pickled steel sheet may only be counted once, regardless of the number of times sheet is rolled or re-processed.

Section 95115(n)(1): Cold Rolled and Annealed Steel Sheet

Sheet that is cold rolled but not annealed is not reported as “cold rolled and annealed steel sheet.” Sheet must be cold rolled before it is annealed; therefore, any product that is annealed has already been cold rolled and meets the MRR definition.

Section 95115(n)(2): Soda Ash

Beginning with 2017 data reported in 2018, the total mass of all soda ash, biocarb (sodium bicarbonate), sodium sulfate, potassium sulfate, potassium chloride, and sodium chloride produced should be reported as soda ash equivalent in short tons on a dry basis. Boron-containing products should be separately reported as boric oxide equivalent described later in this document.

Section 95115(n)(3): Plaster Sold as a Separate Finished Product

When reporting the quantity of plaster that is sold as a separate finished product, the plaster must be mined on-site and sold separately from any other products such as plasterboard.

Section 95115(n)(3): Stucco Used to Produce Saleable Plasterboard

When reporting the amount of stucco used to produce saleable plasterboard, the stucco can be either purchased or mined on-site, and it must not be included in the quantity of plaster that is sold as a separate finished product. The quantity of stucco is reported on a dry basis, and cannot include paper backing or other materials added to plasterboard.

Only stucco that is used to produce *saleable* plasterboard may be reported as covered product data. If the plasterboard is not in saleable condition, the stucco used to produce it cannot be included as covered product data. Operators often use the term “net” to identify saleable plasterboard from “gross” production. Gross production includes trimmings and other waste that is remanufactured back into the process before it can be sold. Net stucco is required to be reported.

Section 95115(n)(4): Nameplate Power of the Units Tested at Turbine and Turbine Generator Set Testing Facilities

The sum of the nameplate power of a unit tested for each unique certification or test protocol shall be reported as horsepower (hp) tested. For example, a 200 hp turbine that is tested for two unique certifications or test protocols shall be reported as 400 hp. A 200 hp turbine tested twice for the same certification or protocol due to a failed test, recalibration, or any other reason shall be reported as 200 hp.

Section 95115(n)(6): Dehydrated Onion, Dehydrated Garlic, Dehydrated Chili Peppers, Dehydrated Parsley, and Dehydrated Spinach

When reporting the production of dehydrated onion, dehydrated garlic, dehydrated chili peppers, dehydrated parsley, and dehydrated spinach, these products may only be counted once. For product that is re-processed by toasting, re-grinding, or other re-

processing, and measured using the same measuring device and data acquisition system as the other initially dehydrated products, either the initial dehydrated product mass or the final product mass may be reported, but not both. For example, in order to only count product once, the sum of all re-processed products is subtracted from the sum of all of the dehydrated products (product that is *not* re-processed and product that is re-processed) to ensure only the initially dehydrated product is reported. If a reporter wishes to change the point of measurement of these covered product data, per section 95103(m) of MRR, the change in method must be approved in advance by CARB.

Section 95115(n)(7): Lager Beer

When reporting the production of lager beer, lager beer that is wasted during filling of containers and is not sold may not be counted as covered product data. Lager beer that is spilled but recovered during container filling may only be reported once and only if that quantity of lager beer is successfully filled in a container for sale.

Section 95115(n)(14): Freshwater Diatomite Filter Aids

When reporting the quantity of freshwater diatomite filter aids, the finished product is most often packed in 25-50 pound bags, but can also be packaged in larger containers. A very small amount of wasted material that is not saleable may *not* be included in the reported quantity of produced diatomaceous filter aids. Filter aids must be mined and produced on-site in order to be reported as produced.

Section 95115(n)(15): Seamless Rolled Ring

When reporting the quantity of seamless rolled ring, waste material sent to an off-site recycling facility must be excluded.

Section 95115(n)(16): Butter and Cream

Butter that is quantified and reported as butter may be reported a second time as butter production if the butter is remelted and re-processed into saleable butter. Butter that is not saleable will likely still meet the definition of "butter," so unless there is evidence that the input that will be remanufactured is not really butter, then both the initial product quantity as well as the remelted and re-processed product quantity may be reported as butter. Butter oil does not meet the MRR definition of butter; therefore, butter oil may not be reported as butter. For butter that is rejected and re-processed into butter oil, the initially produced butter may be reported as butter, even if it was never sold as butter. Per CARB guidance, operators should continue to report reprocessed butter as butter, and not as liquid dairy intermediate milk production, and not as fluid milk

production. Staff intends to clarify MRR in a future rulemaking to make this requirement more clear.

An operator at a single facility may not report both cream and butter when cream production is an intermediate to making butter. Purchased cream churned into butter can be reported as butter production. However, purchased cream that is pasteurized and then sold as cream is *not* cream production because that cream was not produced by the reporting facility. Only reporting-facility-produced cream that does not get churned into butter may be reported as cream production. If a cheese manufacturer produces cream from milk and sells the cream, then that cream is considered covered product data. Cream that is an intermediate in the cheese making process may not be reported as cream production.

Section 95115(n)(16): Fluid Milk Products

For fluid milk products, which include milk, buttermilk, skim milk, and ultrafiltered milk, reporting entities can produce several products in sequence, and products may be sold at different stages in the process. For example, raw milk is converted into cream, skim milk, and/or buttermilk. Cream may be sold or produced into butter, buttermilk may be sold as liquid or dried and sold as powder, and skim milk may be produced into ultrafiltered milk products, evaporated milk, or powdered milk. Because the reporting entity may sell the product at any point in this process, it may not be possible to determine final categorization of the product (whether it is milk, cream, or evaporated milk) until the product is sold and leaves the facility.

Because of the short period for which fluid milk products are stored, and the inability to predict which products will be intermediates to other products in the new data year, milk, buttermilk, skim milk, and ultrafiltered milk can be combined and reported as fluid milk products using sales data without an inventory adjustment. Beginning with 2017 data reported in 2018, milk, buttermilk, skim milk, and ultrafiltered milk are no longer reported as separate products and instead summed and reported as fluid milk products in short tons.

Section 95115(n)(16): Whey Protein Concentrate

Total whey protein concentrate (WPC) includes all WPC produced at the reporting entity for that year. WPC with high protein concentration using diafiltration is a subset of total WPC, which means WPC with high protein concentration is reported under both categories. Total WPC is covered product data, while WPC with high protein concentration is not covered product data.

Section 95115(n)(16): Milk Powder

Powdered milk that is re-processed may be counted as part of the initial production, then re-processed and counted again after the secondary production process. Beginning with 2017 data reported in 2018, all powdered milk, regardless of fat content, may be reported as covered product data.

Anhydrous milkfat and milk protein concentrate are reported starting with 2018 data, but are not covered products.

Section 95115(n)(17): Almonds and Pistachios

Beginning with 2017 data reported in 2018, the quantity of adjusted hulled and dried pistachios and the quantity of flavored pistachios are reported separately as covered product data. Unless hulled and dried nuts are purchased and then sold, a pistachio will be reported in both categories.

The quantities of blanched almonds, flavored almonds, and pasteurized almonds are reported separately as covered product data. Similar to pistachios, an almond might be counted twice: once when it is either blanched or pasteurized, and once when it is flavored. This is designed to accommodate emissions associated with the different stages of processing.

Section 95115(n)(19): Distilled Spirits, Dry Color Concentrate, Grape Juice Concentrate, Grape Seed Extract, and Liquid Color Concentrate

When verifying the production of distilled spirits (proof gallons), dry color concentrate (short tons), grape juice concentrate (gallons), grape seed extract (short tons), and liquid color concentrate (gallons), the verification body separately assesses material misstatement for each of the three units of measure, summing covered products with the same measurement units. Because these three different units of measure cannot be combined when evaluating material misstatement, the gallons of product, proof gallons of product, and the short tons of product must be reasonably assured of no material misstatement in order to receive a positive product data verification statement.

To convert U.S. gallons into proof gallons, multiply U.S. gallons by the percent of alcohol by volume, multiply by 2, and divide by 100. For example, to convert 100 U.S. gallons with 40% alcohol by volume, multiply 100 U.S. gallons by 40% ($100 \times 40 = 4000$), multiply by 2 (8000), and divide by 100. The result is 80 proof gallons. Beginning with 2018 data reported in 2019, verifiers are required to separately evaluate material misstatement for each product with different units of measurement, as required in section 95131(b)(12)(D).

Section 95115(n)(20): Sulfuric Acid Regeneration

Refineries and other facilities that regenerate sulfuric acid for onsite usage or for sale according to the definition in section 95102(c) report the quantity of sulfuric acid that is regenerated on a dry basis starting with 2017 data reported in 2018. The amount of regenerated sulfuric acid should be reported in short tons of dry H₂SO₄ at the output of the process (but prior to mixing with fresh sulfuric acid if fresh sulfuric acid is added to make up for small losses).

Best available methods may be used for a facility that has not reported this data in a previous report, but because petroleum refineries have been reporting this data as part of complexity weighted barrel for previous years, best available methods are not an option. For all facilities reporting covered product data, best available methods apply to the method; the quantity of covered product reported must still meet the +/-5% accuracy requirements in section 95103(k).

Section 95115(n)(21): Boric Oxide Equivalent

Boric acid and other boric oxides must be reported as boric oxide equivalent starting with 2017 data reported in 2018. See section 95102(b) for the definition of boric oxide equivalent, and the boric acid equivalency factors for each of the listed products. The boric acid equivalency factors are weighted on an acid-strength-basis, not on a molecular weight-basis. Additionally, the 99% factor for anhydrous boric acid indicates that the product may have a moisture quantity between 0 and 1 percent in some cases and still be considered "dry."

6 Additional Information

Detailed training materials for reporting using Cal e-GGRT: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/tool>.

The GHG Mandatory Reporting Regulation, with full requirements: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/regulation>.

Contact the MRR helpdesk: ghgreport@arb.ca.gov.

For help with reporting or verification, please contact the appropriate staff member: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/contacts>.